UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,768	02/03/2004	Eog-kyu Kim	101-1013	9288

38209 7590 03/03/2009

STANZIONE & KIM, LLP
919 18TH STREET, N.W.
SUITE 440
WASHINGTON, DC 20006

EXAMINER	
ELAHEE, MD S	

ART UNIT	PAPER NUMBER
2614	

MAIL DATE	DELIVERY MODE
03/03/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/769,768	KIM, EOG-KYU	
	Examiner	Art Unit	
	MD S. ELAHEE	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/18/2008 has been entered.

Response to Amendment

2. This action is responsive to an amendment filed on 12/18/2008. Claims 1-16 are pending.

Response to Arguments

3. Applicant's arguments filed on 12/18/2008 remarks have been fully considered but they are not persuasive because of the following:

Regarding claims 1, 6, 15, the applicant argues on pages 10, 12-14 that AAPA fails to teach or suggest that the main terminal maintains the loop voltage generated when the external terminal is in connection with the telephone network. It is because AAPA's specification teaches

that the loop voltage of the main terminal (i.e. first loop voltage) and the loop voltage of the external terminal (i.e. second loop voltage) of AAPA are not the same, but instead, in fact, are different (paragraph [0004]). Examiner respectfully disagrees with this argument. The applicant did not claim that the main terminal maintains the constant loop voltage generated when the **main terminal is in connection with the telephone network after the external terminal is disconnected from the telephone network**. Instead, the applicant claims that the main terminal maintains the constant loop voltage generated when the external terminal is in connection with the telephone network. AAPA's specification teaches that before the disconnection of the external terminal with the telephone network, there is no change in the first loop voltage. In otherword, AAPA's teaches that the main terminal maintains the constant loop voltage generated when the external terminal is in connection with the telephone network before the disconnection.

Therefore, the rejections of the claims in view of AAPA and Ludeman will remain.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 4-6, 8 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art in view of Ludeman (U.S. Patent No. 6,434,232).

Regarding claim 1, with respect to Figure 1, Applicant admitted prior art teaches a method of operating a main terminal which is connected to a telephone network to communicate with the telephone network and selectively connects an external terminal to the telephone network, the method comprising:

generating an internal current from a loop voltage generated when the external terminal is in connection with the telephone network, if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches applying the generated internal current to the main terminal (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches disconnecting the telephone network from the external terminal and instead connecting the telephone network to the main terminal, wherein while the internal current is flowing in the main terminal, the main terminal maintains the loop

voltage constant when the external terminal is in connection with the telephone network (page 1, paragraphs 0003, 0004);

However, Applicant admitted prior art does not specifically teach obtaining an internal current from a loop voltage generated. Ludeman teaches obtaining an internal current from a loop voltage generated (col.2, lines 27-33). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art to incorporate the feature of obtaining an internal current from a loop voltage generated in Applicant admitted prior art's invention as taught by Ludeman. The motivation for the modification is to do so in order to measure a loop current from a loop voltage.

Regarding claim 4, Applicant admitted prior art, as applied to claim 1, teaches the internal current obtaining operation comprises:

determining whether the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, if it is determined that the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches reading out the loop voltage if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches obtaining the internal current from the read-out loop voltage and proceeding to the internal current applying operation (page 1, paragraphs 0003, 0004).

Regarding claim 5, Applicant admitted prior art, as applied to claim 1, teaches the internal current obtaining operation comprises:

determining whether the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal if it is determined that the external terminal is in use, otherwise returning to the operation of determining whether the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches reading out the loop voltage if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, otherwise returning to the operation of determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches obtaining the internal current from the read-out loop voltage (page 1, paragraphs 0003, 0004).

Claim 6 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Applicant admitted prior art teaches a signal checking unit which checks if a switching request signal requesting that the telephone network be disconnected from the external

terminal and instead be connected to the main terminal is generated, and outputs the result of the checking as a first control signal (page 1, paragraphs 0003, 0004).

Regarding claim 8, Applicant admitted prior art, as applied to claim 8, teaches the internal current production unit comprises:

a second terminal checker which checks use or non-use of the external terminal and outputs the result of the checking as a third control signal (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches a second voltage detector which reads out the loop voltage in response to the first control signal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches a second current controller which obtains the internal current from the read-out loop voltage and applies the internal current to the main terminal, wherein the signal checking unit checks the generation or non-generation of the switching request signal in response to the third control signal (page 1, paragraphs 0003, 0004).

Regarding claim 10, Applicant admitted prior art in view of Ludeman, as applied to claim 6, does not specifically teach that the main terminal is a personal computer or a facsimile. Examiner takes official notice that the main terminal can be a personal computer or a facsimile is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art in view of Ludeman to incorporate the main terminal as a personal computer or a facsimile in Applicant admitted prior

art's invention in view of Ludeman's invention in order to connect a personal computer or a facsimile to a telephone network.

Regarding claim 11, Applicant admitted prior art in view of Ludeman, as applied to claim 6, does not specifically teach that the external terminal is a telephone or an automatic answering machine. Examiner takes official notice that the external terminal can be a telephone or an automatic answering machine is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art in view of Ludeman to incorporate the external terminal as a telephone or an automatic answering machine in Applicant admitted prior art's invention in view of Ludeman's invention in order to connect a telephone or an automatic answering machine to a telephone network.

Regarding claim 12, Applicant admitted prior art, as applied to claim 6, teaches a controller which checks if the loop voltage generated when the external terminal is in connection with the telephone network is maintained when the internal current flows in the main terminal, and generates the selection signal in response to the result of the checking (page 1, paragraphs 0003, 0004).

Regarding claim 13, Applicant admitted prior art, as applied to claim 6, teaches that the internal current production unit generates the selection signal when the internal current is applied to the main terminal (page 1, paragraphs 0003, 0004).

Regarding claim 14, Applicant admitted prior art, as applied to claim 6, teaches the switch request signal inherently comprises an agreed Dual Tone Multi-Frequency code (page 1, paragraphs 0003, 0004).

7. Claims 2, 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art in view of Ludeman further in view of Kunisch (U.S. Patent No. 6,757,378).

Regarding claim 2, Applicant admitted prior art, as applied to claim 1, teaches the internal current obtaining operation comprises:

determining whether the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches reading out the loop voltage if it is determined that the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches reading out the loop voltage [i.e., stored loop voltage], obtaining the internal current from the loop voltage, and proceeding to the internal current applying operation, if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004).

However, Applicant admitted prior art in view of Ludeman does not specifically teach storing the read-out loop voltage. Kunisch teaches storing the read-out loop voltage (col.4, lines 59-64). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art in view of Ludeman to incorporate the feature of storing the read-out loop voltage in Applicant admitted prior art's invention in view of Ludeman's invention as taught by Kunisch. The motivation for the modification is to do so in order to store voltage such that the voltage can be used to measure a threshold value.

Regarding claim 3, Applicant admitted prior art, as applied to claim 2, teaches that the internal current obtaining operation further comprises: determining whether the use of the external terminal has been concluded, after the loop voltage storing operation, wherein if it is determined that the use of the external terminal has not been concluded, the method proceeds to the operation of determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, and if it is not requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, the method proceeds to the external terminal use conclusion/non-conclusion determining operation (page 1, paragraphs 0003, 0004).

Claim 7 is rejected for the same reasons as discussed above with respect to claim 2. Furthermore, Applicant admitted prior art, as applied to claim 6, teaches the internal current production unit comprises:

a first terminal checker which checks use or non-use of the external terminal and outputs the result of the checking as a second control signal (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches a first voltage detector which reads out the loop voltage in response to the second control signal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches a first current controller which reads out the loop voltage stored in the storage unit in response to the first and second control signals and applies the internal current obtained from the loop voltage to the main terminal, wherein the signal checking unit checks the generation or non-generation of the switching request signal in response to the second control signal (page 1, paragraphs 0003, 0004).

8. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art in view of Ludeman (U.S. Patent No. 6,665,398).

Claim 15 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Applicant admitted prior art does not specifically teach a controller controlling the loop voltage constant according to the internal signal. Ludeman teaches a controller controlling the loop voltage constant according to the internal signal (col.5, lines 13-24). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art to incorporate the feature of a controller controlling the loop voltage constant according to the internal signal in Applicant admitted prior art's invention as taught by

Ludeman. The motivation for the modification is to do so in order to keep voltage constant such that the loop current can be reduced to a value below a threshold value.

Claim 16 is rejected for the same reasons as discussed above with respect to claim 15. Furthermore, Applicant admitted prior art, as applied to claim 15, teaches that the main terminal comprises a first DC supply unit, the external terminal comprises a second DC supply unit generating the loop voltage, and the controller controls the first DC supply unit to generate the loop voltage when the telephone network is switched from the external terminal to the mail terminal (page 1, paragraphs 0003, 0004).

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ludeman (U.S. Patent No. 6,665,398).

Claim 15 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Applicant admitted prior art does not specifically teach a controller controlling the loop voltage constant according to the internal signal. Ludeman teaches a controller controlling the loop voltage constant according to the internal signal (col.5, lines 13-24). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art to incorporate the feature of a controller controlling the loop voltage constant according to the internal signal in Applicant admitted prior art's invention as taught by Ludeman. The motivation for the modification is to do so in order to keep voltage constant such that the loop current can be reduced to a value below a threshold value.

Regarding claim 15, with respect to Figures 4-6, Ludeman teaches a main terminal which is connected to a telephone network and selectively connects an external terminal to the telephone network, the subscriber unit 30 [i.e., main terminal] comprising:

an internal current production unit generating an internal signal from a loop voltage generated during on-hook condition (col.5, lines 13-24). However, Ludeman does not specifically teach that the internal signal is generated when the external terminal is in connection with the telephone network. Examiner notes that during the on-hook condition of the subscriber unit 30 [i.e., main terminal], the external terminal of calling party who is calling is connected to the telephone network which is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ludeman to incorporate the feature of a connection of an external terminal with a telephone network in Ludeman's invention in order to generate internal current such that enough ringing signal can be generated to the subscriber.

Ludeman further teaches a controller controlling the loop voltage constant according to the internal signal during the off-hook condition (col.5, lines 13-30). However, Ludeman does not specifically teach that the loop voltage is kept constant when the telephone network is disconnected from the external terminal and connected to the main terminal. Examiner notes that during the off-hook condition of the subscriber unit 30 [i.e., main terminal], the external terminal of calling party who can hang up is disconnected from the telephone network and the subscriber terminal is still connected with the telephone network which is also well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ludeman to incorporate the feature of a disconnection of an

external terminal with a telephone network and connection of the main terminal with the network in Ludeman's invention in order to reduce off-hook overhead due to instability around the transition because of the abrupt change.

Allowable Subject Matter

10. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MD S. ELAHEE whose telephone number is (571)272-7536. The examiner can normally be reached on Mon to Fri from 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/MD S ELAHEE/
MD SHAFIUL ALAM ELAHEE
Primary Examiner
Art Unit 2614
March 3, 2009